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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/039,927	03/16/1998	HENRY A. LESTER	A-63098-I/RF	1215
7590	10/07/2004		EXAMINER	
FLEHR HOHBACH TEST ALBRITTON & HERBERT FOUR EMBARCADERO CENTER SUITE 3400 SAN FRANCISCO, CA 94111			PAK, MICHAEL D	
			ART UNIT	PAPER NUMBER
			1646	

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/039,927	LESTER ET AL.
Examiner	Art Unit	
Michael Pak	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

**THE MAILING DATE OF THIS COMMUNICATION:**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 26 May 2004.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 18,20,23 and 25-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 18, 20, 23, 25-30 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_ .

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 26 May 2004 has been entered.

***Response to Amendment***

2. The amendments filed 26 May 2004 has been entered. Claims 19, 20, 22 and 24 has been cancelled. Claims 18, 20, 23 and 25-30 are pending.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Applicant's arguments filed 26 May 2004 have been fully considered but they are not found persuasive.

***Double Patenting***

5. Claims 18, 25 and 28 are rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 5,734,021 in view of Duprat et al.((22); BBRC, 1995) and Yatani et al.((12); Science, 1987) evidenced by Krapivinsky et al.(Nature, 1995).

The reason for the rejection has been set forth in the previous office action.

Applicant s argue that US patent 5,734,021 does not teach the 50% amino acid sequence identity. However, the KGA of '021 has 100% amino acid identity with claimed SEQ ID NO:2 and 57% identity with claimed SEQ ID NO:6. The regions of high nucleic acid sequence identity will inherently hybridize under stringent conditions.

***Claim Rejections - 35 USC □ 112***

6. Claims 18-24 remains rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection.

The reason for the rejection has been set forth in the previous office action.

Applicants argue that sufficient description is provided with the various subunits of the Kir 3.0 channels. However, one skilled in the art cannot envision all the various species of Kir 3.0 channel subunits because not structure is provided in the claim limitation. *University of California v. Eli Lilly and Co.* (CAFC) 43 USPQ2d 1398 held that a generic claim to human or mammalian when only the rat protein sequence was

disclosed did not have written description in the specification. Thus, the genus of Kir3.0 channels structure cannot be envisioned.

***Priority***

7. Claims 18, 20, 23 and 25-30 are non-obviously broader than claims in the parent application 08/066,371 and thus are not entitled to benefit of the earlier filing date.

The reason for the rejection has been set forth in the previous office actions.

***Claim Rejections - 35 USC 102***

8. Claims 18, 25 and 28 remains rejected under 35 U.S.C. 102(b) as being anticipated by Yatani et al.((12); Science, 1987) with evidence by Krapivinsky et al.(Nature, 1995).

The reason for the rejection has been set forth previously.

Applicants argue that Yatani does not teach cell claimed because it is a patch clamp. However, claims 18, 25 and 28 do not require a cell. Furthermore, the isolated cells of Yatani are provided with heteromeric subunits to form the inward rectifier channels prior to the patch clamp thus meeting the amended claim limitation.

Applicants have not provided evidence that Yatani channels are not the same as Krapivinsky's channels especially since they have the same physiological recording characteristics.

9. Claims 18, 25 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated

by Karschin et al.((8); PNAS, 1991) with evidence by Krapivinsky et al.(Nature, 1995).

The reason for the rejection has been set forth previously.

Applicants argue that Karchin does not teach cell claimed because it is a patch clamp. However, claims 18, 25 and 28 do not require a cell. Furthermore, the isolated cells of Karchin are provided with heteromeric subunits to form the inward rectifier channels prior to the patch clamp thus meeting the amended claim limitation.

Applicants have not provided evidence that Karchin channels are not the same as Krapivinsky's channels especially since they have the same physiological recording characteristics.

10. Claims 18, 20, 23 and 25-30 are rejected under 35 U.S.C. 102(a) as being anticipated by Duprat et al.((22); BBRC, 1995).

The reason for the rejection has been set forth in the previous office actions.

Applicants argue that Duprat does not disclose two different nucleic acid encoding the channel. However, the claims 18, 25 and 28 do not require two different nucleic acid in the claim limitations. Furthermore, Duprat does disclose different Kir 3.0 channel subfamily members expressed in the cells.

11. No claims are allowed.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pak whose telephone number is 571-272-0879. The examiner can normally be reached on Monday-Friday from 8:30 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback, can be reached on (571) 272-0961. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0507.

*Michael D. Pak*  
Michael Pak  
Primary Patent Examiner  
Art Unit 1646  
30 September 2004